



## EXHIBIT A

NAME		POSITION TITLE	
JUAN BALLESTEROS, Ph.D.		Vice President, Research	
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEARS	FIELD OF STUDY
University of Barcelona, Spain	B.A.	1982- 87	Chemistry
Mount Sinai School of Medicine, CUNY	Ph.D.	1989 - 97	Biomedical Sciences

### POSITIONS AND HONORS

#### Professional Experience

- 1997 Postdoctoral Fellow with Dr. Harel Weinstein, Mount Sinai School of Medicine, C.U.N.Y.  
1999 Vice President, Research, Novasite Pharmaceuticals, San Diego, CA

#### Honors and Awards

- 1989-93 Fulbright scholar

### SELECTED PEER-REVIEWED PUBLICATIONS (IN CHRONOLOGICAL ORDER)

1. Ballesteros, J.A. and H. Weinstein, *Analysis and refinement of criteria for predicting the structure and relative orientations of transmembranal helical domains*. Biophys J, 1992. 62(1): p. 107-9.
2. Ballesteros, J.A. and H. Weinstein, *The role of Pro/Hyp-kinks in determining the transmembrane helix length and gating mechanism of a [Leu]zervamicin channel*. Biophys J, 1992. 62(1): p. 110-1.
3. Pardo, L., J.A. Ballesteros, R. Osman, and H. Weinstein, *On the use of the transmembrane domain of bacteriorhodopsin as a template for modeling the three-dimensional structure of guanine nucleotide-binding regulatory protein-coupled receptors*. Proc Natl Acad Sci U S A, 1992. 89(9): p. 4009-12.
4. Zhou, W., C. Flanagan, J.A. Ballesteros, K. Konvicka, J.S. Davidson, H. Weinstein, R.P. Millar, and S.C. Sealton, *A reciprocal mutation supports helix 2 and helix 7 proximity in the gonadotropin-releasing hormone receptor*. Mol Pharmacol, 1994. 45(2): p. 165-70.
5. Weinstein, H., D. Zhang, and J.A. Ballesteros, *Hallucinogens acting at 5-HT receptors: toward a mechanistic understanding at atomic resolution*. NIDA Res. Monogr., 1994. 146: p. 241-62.

6. Sealton, S.C., L. Chi, B.J. Ebersole, V. Rodic, D. Zhang, J.A. Ballesteros, and H. Weinstein, *Related contribution of specific helix 2 and 7 residues to conformational activation of the serotonin 5-HT<sub>2A</sub> receptor*. J Biol Chem, 1995. **270**(28): p. 16683-8.
7. Bramblett, R.D., A.M. Panu, J.A. Ballesteros, and P.H. Reggio, *Construction of a 3D model of the cannabinoid CB<sub>1</sub> receptor: determination of helix ends and helix orientation*. Life Sci, 1995. **56**(23-24): p. 1971-82.
8. Ballesteros, J.A. and H. Weinstein, *Integrated methods for the construction of three dimensional models and computational probing of structure-function relations in G-protein coupled receptors*, S.C. Sealton, Editor. 1995. p. 366-428.
9. Fu, D., J.A. Ballesteros, H. Weinstein, J. Chen, and J.A. Javitch, *Residues in the seventh membrane-spanning segment of the dopamine D<sub>2</sub> receptor accessible in the binding-site crevice*. Biochemistry, 1996. **35**(35): p. 11278-85.
10. Almaula, N., B.J. Ebersole, J.A. Ballesteros, H. Weinstein, and S.C. Sealton, *Contribution of a helix 5 locus to selectivity of hallucinogenic and nonhallucinogenic ligands for the human 5-hydroxytryptamine<sub>2A</sub> and 5-hydroxytryptamine<sub>2C</sub> receptors: direct and indirect effects on ligand affinity mediated by the same locus*. Mol Pharmacol, 1996. **50**(1): p. 34-42.
11. Gether, U., S. Lin, P. Ghanouni, J.A. Ballesteros, H. Weinstein, and B.K. Kobilka, *Agonists induce conformational changes in transmembrane domains III and VI of the beta<sub>2</sub> adrenoceptor*. Embo J, 1997. **16**(22): p. 6737-47.
12. Gether, U., J.A. Ballesteros, R. Seifert, E. Sanders-Bush, H. Weinstein, and B.K. Kobilka, *Structural instability of a constitutively active G protein-coupled receptor. Agonist-independent activation due to conformational flexibility*. J Biol Chem, 1997. **272**(5): p. 2587-90.
13. Konvicka, K., F. Guarnieri, J.A. Ballesteros, and H. Weinstein, *A proposed structure for transmembrane segment 7 of G protein-coupled receptors incorporating an asn-Pro/Asp-Pro motif*. Biophys J, 1998. **75**(2): p. 601-11.
14. Ballesteros, J., S. Kitanovic, F. Guarnieri, P. Davies, B.J. Fromme, K. Konvicka, L. Chi, R.P. Millar, J.S. Davidson, H. Weinstein, and S.C. Sealton, *Functional microdomains in G-protein-coupled receptors. The conserved arginine-cage motif in the gonadotropin-releasing hormone receptor*. J Biol Chem, 1998. **273**(17): p. 10445-53.
15. Javitch, J.A., J.A. Ballesteros, H. Weinstein, and J. Chen, *A cluster of aromatic residues in the sixth membrane-spanning segment of the dopamine D<sub>2</sub> receptor is accessible in the binding-site crevice*. Biochemistry, 1998. **37**(4): p. 998-1006.
16. Simpson, M.M., J.A. Ballesteros, V. Chiappa, J. Chen, M. Suehiro, D.S. Hartman, T. Godel, L.A. Snyder, T.P. Sakmar, and J.A. Javitch, *Dopamine D<sub>4</sub>/D<sub>2</sub> Receptor Selectivity Is Determined by A Divergent Aromatic Microdomain Contained within the Second, Third, and Seventh Membrane-Spanning Segments*. Mol Pharmacol, 1999. **56**(6): p. 1116-1126.

17. Javitch, J.A., J.A. Ballesteros, J. Chen, V. Chiappa, and M.M. Simpson, *Electrostatic and aromatic microdomains within the binding-site crevice of the D2 receptor: contributions of the second membrane-spanning segment*. Biochemistry, 1999. 38(25): p. 7961-8.
18. Liapakis, G., J.A. Ballesteros, S. Papachristou, W.C. Chan, X. Chen, and J.A. Javitch, *The forgotten Serine: A critical role for Ser203<sup>5.42</sup> in ligand binding to and activation of the  $\beta_2$  adrenergic receptor*. J Biol Chem, 2000.
19. Norregaard L, Visiers I, Loland CJ, Ballesteros J, Weinstein H, and U. Gether, *Structural probing of a microdomain in the dopamine transporter by engineering of artificial Zn<sup>2+</sup> binding sites*. Biochemistry, 2000. 39(51): p. 15836-46.
20. Ballesteros, J.A., X. Deupi, M. Olivella, E.E. Haaksma, and L. Pardo, *Serine and threonine residues bend alpha-helices in the  $\chi(1) = g(-)$  conformation*. Biophys J, 2000. 79(5): p. 2754-60.
21. Javitch, J.A., L. Shi, M.M. Simpson, J. Chen, V. Chiappa, I. Visiers, H. Weinstein, and J.A. Ballesteros, *The fourth transmembrane segment of the dopamine D2 receptor: accessibility in the binding-site crevice and position in the transmembrane bundle*. Biochemistry, 2000. 39(40): p. 12190-9.
22. Liapakis, G., J.A. Ballesteros, S. Papachristou, W.C. Chan, X. Chen, and J.A. Javitch, *The forgotten serine. A critical role for Ser-203<sup>5.42</sup> in ligands binding to and activation of the beta 2-adrenergic receptor*. J Biol Chem, 2000. 275(48): p. 37779-88.
23. Govaerts, C., C. Blanpain, X. Deupi, S. Ballet, J.A. Ballesteros, S.J. Wodak, G. Vassart, L. Pardo, and M. Parmentier, *The TxP motif in the second transmembrane helix of CCR5: A structural determinant of chemokine-induced activation*. J Biol Chem, 2001. 276(16): p. 13217-25.
24. Jensen, A.D., F. Guarnieri, S.G. Rasmussen, F. Asmar, J.A. Ballesteros, and U. Gether, *Agonist-induced Conformational Changes at the Cytoplasmic Side of Transmembrane Segment 6 in the beta 2 Adrenergic Receptor Mapped by Site-selective Fluorescent Labeling*. J Biol Chem, 2001. 276(12): p. 9279-9290.
25. Shi L, Simpson MM, Ballesteros JA, and J.A. Javitch, *The first transmembrane segment of the dopamine D2 receptor: accessibility in the binding-site crevice and position in the transmembrane bundle*. Biochemistry. 2001 40(41): p.12339-48.
26. Ballesteros, J. A., L. Shi, and J.A. Javitch, *Structural Mimicry in G-protein-coupled receptors: Implications of the high-resolution structure of rhodopsin for structure-function analysis of rhodopsin-like receptors*. Mol Pharmacol, 2001 60(1):1-19.
27. Ballesteros JA, Jensen AD, Liapakis G, Rasmussen SG, Shi L, Gether U, and J.A. Javitch, *Activation of the beta 2-adrenergic receptor involves disruption of an ionic lock between the cytoplasmic ends of transmembrane segments 3 and 6*. J Biol Chem. 2001 276(31): p. 29171-7.
28. Govaerts C, Lefort A, Costagliola S, Wodak SJ, Ballesteros JA, Van Sande J, Pardo L, and G Vassart, *A conserved Asn in transmembrane helix 7 is an on/off switch in the activation of the thyrotropin receptor*. J Biol Chem. 2001 276(25): p. 22991-9.

29. Visiers, I., H. Weinstein, and J. Ballesteros, *Methods for the Prediction and Molecular Modeling of Membrane Proteins: Application to G protein Coupled Receptors*. Methods in Enzymol. 2002: p. 343:329-71.
30. Lopez-Rodriguez ML, Vicente B, Deupi X, Barrondo S, Olivella M, Morcillo MJ, Behamu B, Ballesteros JA, Salles J, and L. Pardo, *Design, synthesis and pharmacological evaluation of 5-hydroxytryptamine(1a) receptor ligands to explore the three-dimensional structure of the receptor*. Mol Pharmacol. 2002 **62**(1): p.15-21.

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\*\*\*\*\* NOTICE OF GRANT AWARD \*\*\*\*\*  
SMALL BUSINESS INNOVATION RESEARCH PROG Issue Date: 07/31/2003  
Department of Health and Human Services  
National Institutes of Health  
NATIONAL INSTITUTE OF MENTAL HEALTH  
\*\*\*\*\*

Grant Number: 1 R43 MH068919-01  
Principal Investigator: SALOM, DAVID PHD  
Project Title: Purified Serotonin Receptors for Structural Studies

VICE PRESIDENT, RESEARCH  
NOVASITE PHARMACEUTICALS  
11095 FLINTKOTE AVENUE  
SAN DIEGO, CA 92121  
UNITED STATES

Budget Period: 08/01/2003 - 01/31/2004  
Project Period: 08/01/2003 - 01/31/2004

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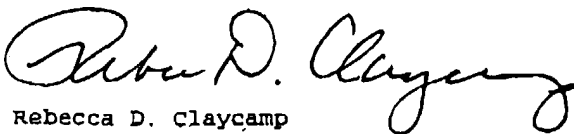
The National Institutes of Health hereby awards a grant in the amount of \$148,940 (see "Award Calculation" in Section I) to NOVASITE PHARMACEUTICALS, INC. in support of the above referenced project. This award is pursuant to the authority of 42 USC 241 42 CFR PART 52 15 USC 638 and is subject to terms and conditions referenced below.

Acceptance of this award including the Terms and Conditions is acknowledged by the grantee when funds are drawn down or otherwise obtained from the grant payment system.

Award recipients are responsible for reporting inventions derived or reduced to practice in the performance of work under this grant. Rights to inventions vest with the grantee organization provided certain requirements are met and there is acknowledgement of NIH support. In addition, recipients must ensure that patent and license activities are consistent with their responsibility to make unique research resources developed under this award available to the scientific community, in accordance with NIH policy. For additional information, please visit <http://www.iedison.gov>.

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Sincerely yours,



Rebecca D. Claycamp  
Grants Management Officer  
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